HOM Rounds

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"Bedrest is Bunk": Interrogating the regimen of rest in treating 19th-century hysteria

Yashaswani Chauhan

In modern medicine, 'bed rest' is a commonly prescribed treatment option to manage disorders with vague etiologies and symptoms. Most often, these 'vague' conditions are associated with women, including pregnancy, pain and mental disorders, suggesting a gender bias in the prescription of bed rest. Interestingly, the roots of this bias lie in the 19th century, with the popularization of the 'rest cure' as a treatment for female hysteria.

Hysteria, which comes from the Greek word for "womb", was a formal medical diagnosis of mental illness in women displaying a wide array of nervous symptoms including anxiety, nausea, abdominal heaviness, and other deviant behaviours that persisted until the 1980s. At the time, the only available treatment for these so-called 'nervous' women, was the rest cure. Developed by American neurologist Silas Weir Mitchell (1829-1914) to treat injured veterans during the U.S. Civil War, the rest cure expanded into an aggressive 6–8-week treatment regimen prescribed primarily to upper-middle-class women, involving complete isolation, enforced bed rest, force-feeding and no intellectual stimulation whatsoever. The female patient experience of the rest-cure is infamously outlined in the harrowing semi-autobiographical recount "The Yellow Wallpaper" written by Charlotte Perkins Gilman (1860-1935) in 1892. Using Gilman's account alongside other patient experiences of Dr Mitchell's treatment drawn from the medical literature, this presentation examines the rest cure within the context of 19th-century neurasthenia and hysteria through a feminist lens, unpacking a gendered view of the male-physician to female-patient dynamic.

This focused case study of the 19th-century rest cure provides a window into broader discussions of debatable treatment practices in female mental health and their persistence. Despite the evidence against the rest cure and advancements in psychiatric diagnosis and treatment, many physicians continue to prescribe bed rest when encountering female symptoms that are difficult to explain. The extent to which medicine still struggles to contextualize and treat women's mental health suggests that the rest cure is not an isolated example of a medical treatment that is complicated by gender, class, and cultural structures.

The Gate Control Theory of Pain: How the Medical Community Reacts to New and Bold Ideas

Brian Cho

In 1965, Ronald Melzack and Patrick D. Wall published what later became one of the most influential papers on pain: "Pain Mechanisms: A New Theory." In the journal, *Science*, they proposed a novel theory: pain is modulated by a gate control system within our central nervous system. While the theory is now considered a foundational piece on pain, the first few years of its infancy were controversial, leading it to be disputed in many conferences.

Prior to Melzack and Wall, the two most accepted ideas behind pain were: 1) Specificity theory: the body has dedicated pain receptors that lead to a pain centre within the brain, and 2) Pattern theory: nerves used to detect pain also detect different stimuli which the brain interprets. The pair sought to create a general theory of pain that would satisfactorily explain and incorporate the many theoretical mechanisms postulated at the time. While later research would identify some shortcomings of the theory, Melzack and Wall's paper led to significant advancements in the field of pain.

Drawing from medical literature, scientific journals, and newspapers, I will outline the historical shift in the view of the gate control theory of pain, highlighting the dominant voices supporting and resisting this new theory. By examining the highly critical initial reaction to the theory to how it later became one of the most cited works of the 20th century, I will focus on the medical community's reactions to, and lengthy pathway of acceptance and adoption of, novel ideas in medicine. Mechanisms, such as publication bias, might cause the 21st-century medical community to overlook novel ideas from young researchers or theorems that challenge established ideas, dooming us to make the same mistakes as our peers from the 1960s and 1970s.

From Metal Hooks to Modern Plastics: The Evolution of the Speculum and the Role of Medical Professionals in the Adoption and Use of Medical Devices

Ashritha Durvasula

Used during pelvic exams and Pap smears, the vaginal speculum is an important instrument for diagnosing various gynecological conditions. The design of this instrument allows for a clear view of the vaginal canal but, for many decades, practitioners and patients were less than relaxed with this instrument. Its use was (and continues to be) uncomfortable for the patient and many practitioners expressed moral qualms about using it on their female patients for reasons of cultural modesty and fears of accusations of improper behavior. By the late 20th century, a greater number of female gynecologists were practicing medicine; at the same time, the design and use of the vaginal speculum instrument had changed: is there a co-relation between these two occurrences? This presentation will discuss how the vaginal speculum was developed and used over the past 150 years, outlining design changes, and investigating patient and practitioner concerns.

Drawing from the medical literature, this presentation explores the use of the vaginal speculum and the concerns expressed by patients and practitioners. In particular, the language used in 19th century medical articles, including “the toucher,” “indelicate exposure,” and “competent physician,” employed in discussions among practitioners in using the vaginal speculum will be analyzed alongside the secondary literature of 19th century sexual mores, female modesty, and doctor-patient relationships, as discussed by Margarete Sandelowski, Wendy Mitchinson, and other medical historians.

With patient-centered care at the forefront of healthcare, the speculum and the pelvic exam remain important health care tools for women’s health, adjusting to patient experiences and practitioner requirements. This presentation will examine what these cultural and demographic shifts signify to the ever-evolving design and adoption of new medical devices.

Delayed Adoption of the Diagnostic Lumbar Puncture:
Spurred by Procedure Limitations or Individual Voices?

Lina Ghattas

Amidst controversy surrounding procedure credit, German internist and surgeon Dr. Heinrich Irenäus Quincke (1842-1922) is most often recognized as introducing the lumbar puncture procedure. The procedure's diagnostic and therapeutic value were demonstrated during the 1890s and integrated into practice by the early 20th century, but remained embroiled in controversy thereafter.

The controversy arose due to rare cases of sudden death following a lumbar puncture. Despite the proven diagnostic value of the lumbar puncture, powerful physicians, such as Sir William Gowers (1845-1915), actively spoke out against it and banned its use in their medical centres. No British medical books were published on the topic until 1925—more than 30 years after its introduction. However, it is still unclear whether the driving factor of this hesitancy related to the morbidity and mortality associated with the procedure or if it was simply due to the authority of senior physicians. Were the dissenters genuinely advocating for patient safety or preferring to stick to the status quo?

This project will explore the controversy surrounding the introduction of the lumbar puncture procedure by examining the medical literature, including Quincke's 1891 publications and published counterarguments. It will explore the synergistic nature of medical technology and procedures, recognizing the advent of imaging and the associated decrease in lumbar puncture-related mortality. This work aims to explore influencing factors that shifted the lumbar puncture from a procedure cloaked in controversy to one of the most commonly performed internal medicine procedures today.

Perseverance at what cost? The complicated narrative of early cardiac transplantation and the role of Dr. Norman Shumway

Wen Teng Hou

In 1967, South African surgeon Dr. Christiaan Barnard performed the first successful heart transplant and thereafter, cardiac surgeons jumped on the bandwagon, but the early results were abysmal. Patient mortality was more than 75% and most who survived only extended their lives by a matter of days in the intensive care unit. The mounting criticisms culminated in the American College of Cardiology (ACC) recommending a halt on all heart transplantations in 1970.

Yet surgeon Dr. Norman Shumway refused to abandon the procedure and persisted. As arguably the most prepared surgeon for heart transplant in the US with a decade of pre-clinical research experience, Shumway's first two cases nevertheless failed like his contemporaries. The first patient died after 15 days of intensive care, and the next died after 3 days. Still, Shumway chose to persist. The Stanford team studied organ rejection while continuing to perform human transplants, despite ACC's recommendation. By the late 1970s, Shumway's patients had a 50% first year survival, arguably the best attainable result until the implementation of the immunosuppressive drug cyclosporine.

This presentation analyzes the concept of perseverance as it relates to surgical innovation, in the context of Shumway's work. How do we evaluate if researchers' continued efforts are a sign of heroic perseverance against an insurmountable challenge, or a sign of recklessness when the procedure was demonstrated to be unsafe? The driving factors that facilitated Shumway's success when his contemporaries abandoned or discouraged the procedure will also be explored. These analyses will be based on academic publications from Shumway's team. More importantly, commentaries and editorials from Shumway's contemporaries will also be examined for the "perseverance" narrative that emerged regarding Shumway's continued work. The presentation aims to interrogate the trope of perseverance in medicine and to suggest that recklessness, even misjudgement, occurs in surgical innovation.

Mutilation in Neurosurgery: A Comparison of the Factors Enabling the Harm Committed by Walter Freeman and Christopher Duntsch

Nicholas James

Neurosurgery possesses inherent risks due to the small margin of error when operating on one of the human body's most complex systems. Awarded a controversial Nobel Prize in 1949, neurologist António Egas Moniz developed the leucotomy for the treatment of mental illness. Part of the growing field of psychosurgery, this procedure involved the lesioning of white matter tracts within the frontal lobe using a metal instrument inserted through small holes made in the skull.

The neurologist Walter Freeman performed his first leucotomy in 1936 and popularized the procedure in the United States. Having changed the name of the procedure to lobotomy, Freeman developed a new transorbital lobotomy technique and began completing said procedure without neurosurgical assistance. Despite poor patient outcomes, including numerous patient deaths, and a disregard for patient safety, Freeman performed over 3000 prefrontal and transorbital lobotomies between 1936 and 1967.

Decades after Freeman's death, former neurosurgeon Christopher Duntsch began practicing spine surgery independently in 2011. Duntsch was stripped of his medical license in 2013 after harming 33 of 37 patients he operated on over the span of two years, with two patients dying shortly after surgery. Sentenced to life imprisonment in 2017 for intentionally injuring an elderly individual during surgery, Duntsch's story has garnered widespread media attention and led to questions over the delay in intervention and suspension of his medical license.

Drawing from primary and secondary medical literature and media articles chronicling the deadly exploits of Freeman and Duntsch, this presentation will examine the various factors that enabled the significant harm committed by these two individuals. Ego, public trust, and poor communication amongst their medical colleagues were key contributing factors that allowed Freeman and Duntsch to practice on extremely vulnerable patients for as long as they did, resulting in considerable patient morbidity and mortality.

Reconstructing Identity: Dr. Harold Gillies and the Role of Facial Reconstruction in Defining Essential Care

Helen Jin

Against the backdrop of World War I, Dr. Harold Gillies transformed medicine by recognizing the power of surgery to heal not just the body, but also the soul. The Great War saw the advent of modernized warfare, and with it, unprecedented destruction. Unlike soldiers who suffered from maimed bodies, men who returned home with severe facial disfigurement found themselves ostracized, rejected by loved ones, and relegated to the unseen corners of society. Witnessing both the physical and psychological trauma endured by these veterans, Gillies went beyond what was deemed surgically necessary for restoring function and instead sought to rebuild form as well. Pioneering the tubed pedicle skin-grafting technique, he revolutionized the art of facial reconstruction and helped thousands of patients re-integrate back into society.

Continuing to push the boundaries of the surgical field, Gillies would later modify his tubed pedicles technique into a procedure for phalloplasty, going on to performing the first female-to-male gender confirmation surgery. Moved by the appeal of fellow physician Michael Dillon, who felt “not truly a woman”, Gillies not only developed the novel surgery, but also took steps to conceal the procedures for Dillon’s protection and stood by his patient when Dillon was eventually outed to an enraged public.

Gillies’ biography consistently demonstrates a drive to integrate both psychological and physical healing into surgical practice. Using medical journal articles, media publications, and Gillies’ own accounts, this presentation will examine the ways in which Gillies changed the conception of holistic patient care within the field of surgery and the implications of these lessons on modern day practice. With the current post-pandemic backlog in surgical cases and the changing access to psychological care within Canada, this presentation draws on the historical context of Dr. Harold Gillies to explore the question: what should constitute essential care?

“Some Homicides Are Justified”: Sue Rodriguez and Physician-Assisted Suicide in the Court of Public Opinion

Aishwarya Kulkarni

In 1993, Sue Rodriguez appeared in the Supreme Court of Canada arguing for her right to die. Diagnosed with amyotrophic lateral sclerosis (ALS), she wanted the ability to undergo physician-assisted suicide when she felt that her condition had deteriorated enough that she no longer had the capacity to enjoy life. Ultimately, she lost when the court voted against her 5–4. While at the time her case set the precedent that medically assisted death was both illegal and immoral, this was eventually reversed when medical assistance in dying (MAID) was legalized in Canada in 2016.

Rodriguez illegally ended her life in 1994 with the help of an anonymous physician. Her story was publicized in Canadian media and she gained many supporters as she moved through the legal process. Her popularity continued to soar especially after her death, inspiring among other things, a documentary and a biography about her life. Through the examination of Canadian newspaper articles, periodicals, government publications, and academic literature, this presentation will explore the media narratives about physician-assisted suicide in the 1990s, arguing the significance of the Sue Rodriguez case in shifting public opinion to favour legalization. This presentation also reflects on the moral debates over physician-assisted suicide that were occurring at this time and contextualize them by outlining the discussion about this issue before the 1990s. In addition, it will briefly assess changing ideas about human dignity in the late 20th century, especially about ethics in end-of-life care. Today, debate about MAID continues over the question of extending access to Canadians suffering solely from mental illness. This presentation will end by highlighting how moral stances around physician-assisted suicide have shifted since the death of Sue Rodriguez, highlighting the Carter v Canada case in 2015 which overturned the ruling made in Rodriguez’ case.

The innovation lag between the invention and adoption of mammography for breast cancer screening: A Canadian case study of "best practice"

Rahman Ladak

In 1960, an American radiologist named Dr. Robert Egan developed x-ray imaging protocols that had a 97% correspondence rate with traditional physical exams and biopsies in successfully diagnosing breast cancer, thus earning him the moniker "father of mammography." Even at this stage, mammograms held many advantages over clinical breast exams, including being less invasive/disfiguring, capable of identifying cancers at earlier stages, and having economies of scale. Nevertheless, mammograms were only promoted in screening programs by 1990, with Canada starting in 1992 only a few years after America and numerous European countries.

In this context, I will investigate why there was a delay between mammography's invention in 1960 and its adoption as best practice by 1990. This case study will focus on Canada and situate it within the international medical context when relevant. I hypothesize that the adoption took long because of contradictory evidence from clinical trials, the unwillingness of companies to invest in/develop mammography technology, the prohibitive costs of the first machines, and social stigma around the discussion/recognition of breast cancer as a major cause of death. However, there were also important political forces that promoted the widespread use of mammography units, such as feminist activism (e.g. 'pink ribbon movement') and governments prioritizing breast cancer prevention.

This research draws from a variety of primary source material, including Dr. Egan's landmark publication, clinical trials assessing mortality outcomes following mammography screening, and reports by expert-led committees such as the Canadian Breast Cancer Initiative. Secondary sources referenced include the works of medical historians, such as Barron Lerner's *Breast Cancer Wars*, Kirsten Gardner's *Early Detection*, and Ilana Lowy's *Preventive Strikes.* This study is important for its focus on the Canadian experience, its scrutiny of an innovation lag in medicine and its examination of the influence of politics, economics, and social stigma on best practices.

Who cares about multidisciplinary care? Lessons learned through the diagnosis of Hirschsprung's disease

Matthew Lawrence

In 1886, Dr. Harald Hirschsprung described a fatal pediatric illness involving chronic constipation which did not resolve with conventional treatments. Congenital aganglionic megacolon, also called Hirschsprung's disease, affects the large bowel (colon) where patients are unable to properly move stool. Upon autopsy, it was discovered that afflicted patients suffered a bowel obstruction, assumed to cause dilated loops of colon proximally with an ordinary appearing rectum distally. Over the next 62 years, pathologists, radiologists and surgeons worked discordantly to unravel the convoluted clinical presentation and pathophysiology, culminating in an efficacious surgical treatment for Hirschsprung's disease, but did it have to take that long?

During the late 19th century, surgeons possessed a poor pathophysiology understanding and few effective medical treatments for Hirschsprung's disease. Many surgeons chose to resect the dilated colon, but with varying success. Pathologists examining Hirschsprung's noted colonic sections devoid of ganglionic cells. In 1901, Dr K. Tittel proposed the aganglionic rectum hypothesis, but it was not immediately connected to the surgical treatment. An astonishing 47 years later. surgeon Dr. Swenson brought pathology into the operating room when he introduced rectal biopsies and pathological evidence of disease presence as needed procedure to guide removal of the aganglionic colonic section.

Examining published medical articles by Swensen, Tittel and others, this presentation provides a case study to explore the indispensable intertwined relationship of pathology and surgery. These disciplines are often seen as opposing--micro- vs. macroscopic, deceased vs. living, feeling vs. seeing. The story of Hirschsprung's disease reveals the importance of understanding the "why?" of surgery and calling on multidisciplinary colleagues to gain greater disease understanding. By combining areas of medicine harmoniously, a successful surgical technique may have been developed years prior to 1948. With the new age of multidisciplinary healthcare, Hirschsprung's disease showcases the importance of the intertwined relationship of surgeons and pathologists.

On the Borderline: Otto Kernberg's continued influence on the conceptualization and treatment of borderline personality disorder

Ashvent Malik and Daniel Tamburri

Theories of personality have captivated the human mind since the ancient writings of Hippocrates and Galen. Psychiatry itself emerged as a medical specialty in the 1800s and underwent an intellectual revolution in the late 19th and early 20th centuries changing the way personality is conceptualized through the development of psychoanalytic theory. Thereafter, psychoanalytic theory dominated the discourse and characterization of pathological personality types in the 20th century.

Borderline Personality Disorder (BPD) first became a discrete diagnosis of its own with the publication of the DSM-III in 1980 and continues to be one of the most controversial diagnoses in the DSM. Prior to the publication of the DSM-III, the two ends of the psychopathology spectrum consisted of neurosis (i.e. mental disorders amenable to psychoanalysis) and psychosis (i.e. disorders untreatable with psychoanalysis wherein reality testing no longer remains intact). "Borderline" as a term was first used by Dr. Adolph Stern in 1938 to describe patients who would develop transient psychosis and "regress" into "borderline schizophrenia". Dr. Otto Kernberg took this concept one step further to describe borderline personality organization as an entity distinct from neurosis or psychosis that is characterized by an unstable pattern of functioning and behavior stemming from persistently primitive object relations and defense mechanisms.

Shortly following Kernberg's distinction, BPD was included in the DSM for the first time. Drawing on case histories, journal articles, and Kernberg's papers and correspondence, this presentation examines the impact of Kernberg's work on our modern conceptualization of borderline personality. While there have been challenges to his work, this presentation argues that although psychoanalysis no longer dominates modern psychiatry, Kernberg's definition of borderline personality is significant as it serves not only as the backbone of our current understanding but continues to inform contemporary treatment models for BPD.

The Insidious Toxicity of a Promising Player: The Lethal, but Overshadowed Relationship between Pneumonia and Clozapine Use

Andrew Nguyen

Discovered in 1958, clozapine challenged the established view of extrapyramidal symptoms being an intrinsic side effect of antipsychotic use and is currently the gold standard choice for treatment-resistant schizophrenia (TRS). Although case studies demonstrated its efficacy over other antipsychotic agents in TRS, clozapine has a complex history, most notably, for its life-threatening side effect profile. In 1975, concerns over agranulocytosis-related deaths in Finland led to growing skepticism by clinicians and its subsequent halt in pharmaceutical development. However, after several randomized clinical trials in the US and guidelines for white blood cell (WBC) monitoring were established, clozapine proved to be efficacious for TRS, leading to full FDA approval in the late 1980s.

Pharmacokinetic advancements in the 1990s found that cytokines decrease the expression and activity of cytochrome P450 1A2 (CYP1A2), which metabolizes many pharmaceutical agents, including clozapine. This finding was first demonstrated in a bronchodilator agent, theophylline, in 1978 and several decades later with clozapine. Recent findings have shown that inflammation during pneumonia releases cytokines that inhibit CYP1A2 expression, thereby increasing serum levels of clozapine to extremely toxic levels. As a result, these levels create a lethal positive feedback loop resulting in a plethora of life-threatening symptoms including hypersalivation, sedation, and aspiration. While much clozapine research has been conducted on agranulocytosis-related deaths, pneumonia-associated deaths have been overlooked.

Drawing on primary sources, case studies, and extant secondary literature, this presentation will examine the controversial history and development of clozapine as a treatment for TRS, along with the 1990s pharmacokinetic advancements that demonstrated clozapine toxicity induced by pneumonia. With the rise of the COVID-19 virus and the increasing prevalence of respiratory-related mortality and TRS, this presentation will conclude with an examination of clozapine use in patients with comorbid pneumonia, one of the most significant life-threatening medical events connected with this atypical antipsychotic use.

Nine Lives: The Longevity of Catgut with Antisepsis

Tarquin Opperman

Catgut, an early suturing material created from the collagen-rich intestines of various animals, is a rarity in the field of medicine in terms of its longevity. Dating back to the second century, the Greek physician Galen recorded his use of catgut in suturing the severed tendons of gladiators and, thereafter, its medical use continued into the 20th century before being replaced (for the most part) by modern synthetic equivalents. The endurance of catgut can be credited to its availability and, more importantly, its ability to be dissolved by the body. This attribute was in sharp contrast to the competing material, silk sutures, and at various points it contributed to catgut's popularity or disdain. Where early in its history catgut's absorbability made it attractive for internal procedures, by the 19th century it was rejected as wounds had to be continuously reoperated upon due to secondary hemorrhaging.

During the 1870s Joseph Lister, widely regarded as the father of modern surgery, breathed new life into the material. After failing to resolve the primary issues with silk, Lister turned to catgut, where, through the use of carbolic acid, he remedied the concern of its rapid dissolution while simultaneously implementing his discoveries in sterilization. Though catgut never achieved absolute universal support, Lister's research carved a place for the material in the new era of surgery, leading to its mass-production and adoption by the 1890s.

Through the analysis of primary sources and specifical medical articles written by catgut suture supporters and critics, this presentation explores the evolution of catgut, its rising popularity and adoption as an important surgical tool following the incorporation of sterilizing procedures. It will highlight the factors behind the widespread hesitancy to its use, including the reliance on anecdotal experience and institutional hierarchy that continue to pervade and hinder medical advancement today.

Mouth-to-Mouth in Cardiopulmonary Resuscitation: Why it Fell Out of Favour in the 19th century and how it was Resuscitated

Arjun Patel

Mouth-to-mouth resuscitation has existed since at least 1732, when Scottish surgeon William Tossach successfully used his technique to breathe life back into a coal miner. In the following decades, the technique spread throughout Western Europe and became commonplace in countries such as the Netherlands, Germany, and the United Kingdom. It is still a commonly used component of cardiopulmonary resuscitation (CPR) and is taught worldwide. However, between 1856 and 1858, two British physicians named Marshall Hall and Henry Silvester advocated for a new method of resuscitation, the final version of which was dubbed the "Silvester method." Unlike mouth-to-mouth resuscitation, this technique consisted of the healthcare provider moving the patients' body in specific ways in order to mimic respiration. Despite any evidence that the Silvester method was effective, it became the standard of care in the Western world for the next century, until an American physician named James Elam re-popularized mouth-to-mouth resuscitation.

This paper will examine the question of why the Silvester method generally replaced mouth-to-mouth resuscitation for a century, and why this change was later reversed. Themes involved will include the contemporaneous medical community's reliance on theoretical knowledge, the influence of renowned physicians such as Friedrich von Esmarch, the numerous revisions to the Silvester method, and the later evidence-driven arguments of James Elam. To answer this question, this presentation will use contemporaneous scientific publications and reports, in addition to relevant secondary literature.

More Similarities than Differences in Caring for the Sick and the Dead:

An Analysis of Boccaccio's account of the 14th C Bubonic Plague in comparison with the COVID-19 Pandemic

Alisiya Petrushkevich

Yersinia pestis, the causative agent of the bubonic plague, is among the most virulent pathogens to humans. During the Second Plague Pandemic (1346–1840), *Y. pestis* spread throughout Afro-Eurasia with a mortality rate between 30–50%. The initial outbreak, later named the Black Death (1346–52), shared many similarities with the COVID-19 pandemic regarding the care of the sick and dead.

Giovanni Boccaccio, an Italian author, wrote about the plague in his collection of novellas, *The Decameron* (1353). It includes Boccaccio's personal account of the plague outbreak in 1348, revealing the reactions to the epidemic, the responses by individuals in different social classes and early public health measures to contain the disease. By interrogating Boccaccio's views as expressed in *The Decameron*, this project identifies similarities and differences between 14th-century pandemic fears and anxieties and the 21st-century COVID-19 experience.

The Decameron evokes déjà vu as 14th-century Florentine citizens either exiled themselves or disregarded public health measures to go out, eat, and drink. Boccaccio describes the symptoms of the plague and its patterns of transmission, and mocks treatments taken by plague sufferers—all of which illustrate how individuals attempted to understand and survive this disease outbreak. The theme of isolation is an unsettling aspect of Boccaccio's account; many sick individuals are neglected by their families and left to be cared for by servants. Additionally, the rejection of public health decrees and the abandonment of burial practices for the unceremonious dumping of bodies into mass graves show the breakdown of social order.

Despite advancements in science and medicine, the parallels between the Black Death and COVID-19 are striking. The behaviours exhibited during the 14th-century pandemic are surprisingly similar to 21st-century pandemic anxieties, illustrating the shared human experiences of major disease events despite the centuries-long time gap and significant scientific and political differences.

Birds, Birdcages, and Bedlam: Visualizing the Victorian Asylum through Material Culture

Jelena Poleksic

Nineteenth-century asylums have traditionally been associated with familiar "icons" such as straight jackets, beds, and padded cells, as well as other objects that could enforce isolation and discipline. However, visitors to the London Science Museum may come across a birdcage that once housed four parrots, an essential piece of asylum-based material history overlooked until now.

Donated to the Sussex Lunatic Asylum in 1872, the birdcage and its former inhabitants were sources of comfort, colour, and song for patients. As symbols of the natural world, birds had significant therapeutic potential in the asylum environment by helping patients cultivate the moral virtues of sensibility, sociability, and cheer. Birds were an institutionally sanctioned way for patients to practice their caretaking skills to ease their return to society. They mediated domesticity and domestication, teaching behaviours corresponding to a bourgeois and gendered identity.

This paper situates the birdcage in its proper context to enrich our understanding of moral treatment, domesticity, and recreation in 19th-century British asylums. This paper begins by examining the history of birds as pets in asylums and their utility as therapeutic and disciplinary tools within the moral treatment regime. It addresses how birds enhanced the domesticity of the asylum environment and domesticated patients. The analysis of the materiality of the birdcage itself is supplemented with asylum case histories, staff narratives, and extant secondary sources.

By viewing the history of psychiatry through the lens of material culture – or the bird's eye view – this paper argues that birds not only acted as means of recreation and occupation but also mediated socialization and patient resistance. Unraveling this material history can humanize the inner life of an asylum and dismantle the stigmatization of psychiatry and its patients, both past and present.

""Remedy as bad as the Disease": Discourses about vaccination surrounding the 1901 St. Louis and Camden tragedies"

Heather Schwartz-Narbonne

In October of 1901, 13 children in St. Louis contracted and died of tetanus after receiving the diphtheria antitoxin. That November, another 9 children in Camden experienced the same fate, this time after receiving the smallpox vaccine. These tragedies were the subject of much discussion across different spheres of society, including among anti-vaccinationists, physicians, pharmaceutical manufacturers, and politicians. While each of these groups placed the blame for these deaths on someone or something else, it was later discovered that both the antitoxin and vaccine had been infected with tetanus due to improper care and handling. This presentation will use newspaper articles, pamphlets, reports, journal articles, and advertisements to explore the discourses surrounding vaccination in the United States from 1900-1902 – before, during, and after the events.

Examining who was blamed and how it was communicated offers insight into the social and political dynamics between these overlapping sections of society. Public safety may have been the topic of discussion throughout the events, but swaying opinions was the true goal of these communications. Various factions and special interests, each with a stake in framing public discourse and policy regarding vaccination, reached out to different audiences with strategic emphasis on the best medium and rhetorical framing to use for each group.

The public outcry which resulted from these tragedies was the impetus behind the Biologics Control Act of 1902, which was the first US federal regulation of the pharmaceutical industry and the first federal intervention into public health. This action represented an early step towards the establishment of the modern-day FDA. The St. Louis and Camden tragedies were political turning points, and discussions around them paint a picture of a society in flux, where discourse was helping to shift the rhetoric away from anti-vaccination and toward public trust.

“Women’s Work”: Sociocultural Factors Contributing to Demographic Transition in the Field of Obstetrics and Gynecology

Hannah Skarnikat

For hundreds of years, providers of female reproductive healthcare were most often women. Midwives and apprentices assisted other women during childbirth, with relatively few male midwives involved. The field of midwifery was unregulated and generally separate from medicine until the 17th and 18th centuries when childbirth began to interest an increasing number of physicians. The development of obstetric tools such as forceps and complex procedures including caesarean section, led to the inclusion of obstetrical education in medical curriculums, and the field became dominated by men by the 20th century. Following the medicalization of childbirth, midwives played a much more indirect role in birthing rooms while male physicians handled deliveries. In the early 20th century, more women began to access medical education, though substantial involvement in obstetrics and gynecology (OB/GYN) was not marked until the 1960s and 70s. Since then, the proportion of women in the specialty continued to increase, until women practitioners dominated the field by 2010.

This same trend has occurred across Western Europe, the United States, and Canada. This presentation probes the historical factors that have contributed to the demographic transition in the field of OB/GYN since 1950. Drawing on case histories, journal articles, and proceedings of professional associations which examine demographic data and public opinion on the topic, this presentation explores the ways in which social movements and access to medical education have driven this transition and how physicians and patients have navigated these changes. Today, nearly 85% of OB/GYN residents are female, a statistic towards which opposing opinions exist. Whether this dominance of the field by women is positive or not has also prompted inquiry into whether physician gender is relevant to patient experiences and outcomes. In conclusion, the historical context provided by this presentation is used to inform a response to this modern dispute.

The Great Gas Debate:
An Exploration of the Origins and Differences in 19th Century Anesthetic Practices between the United States and the United Kingdom

Claire Vannelli

Prior to the discovery of effective analgesia or antiseptic practices in surgery, operating theatres were often seen by society as 'gateways of death' and sites of intense pain. For patients, pain management employed ancient practices involving the opium poppy, hyoscyamine and coca plants. The advent of anesthesia in the 1840s ushered in 'painless surgery' for patients and empowered surgeons to attempt operations of greater complexity and duration. Further, the invention of the hypodermic needle in 1855 enabled intravenous administration of anesthetic drugs.

These discoveries of the 1840s centered on the anesthetic properties of three gasses: nitrous oxide, ether, and chloroform. Originally utilized for sedation in dental procedures, nitrous oxide was found to have analgesic effects by American dentist Horace Wells. Encouraged by this success, American dentist and physician William Morton created an inhaler to deliver the compound ether and anesthetized a surgical patient in 1846. One year later in Scotland, Sir James Simpson set out to improve upon these anesthetics and found chloroform to be less flammable, have fewer side effects and a better fragrance. During the American Civil War, chloroform was preferred by soldiers primarily due to its shorter administration time and lower dose. However, in operating theatres and into the twentieth century, Americans were distinctly pro-ether while Brits remained pro-chloroform.

Drawing from 19th century medical literature, medical instrument catalogues, and secondary literature (ie. M. Pernick, *A Calculus of Suffering*; S. Snow, *Blessed Days of Anesthesia*), this presentation will examine the three different 19th century anesthetic gasses and interrogate the role of 'place'. Collections from the Wellcome Library, the National Library of Medicine and Western Libraries are also referenced. This work aims to examine the benefits and limitations of each anesthetic gas and investigate the ways that people and culture influence the adoption of one medical practice over another.

New Century, Same Struggle: The Grapple Between Optometry and Ophthalmology

Danielle Vucenovic

In the past decade, team based eyecare has led to superior patient outcomes while improving system efficiencies, especially in the field of eyecare. Yet, the shaping of effective ocular interdisciplinary team care has not been without its challenges. The invention of the ophthalmoscope in 1851 allowed for effective assessment and treatment of ocular diseases by physicians for the first time. Initially, only ophthalmologists were trained to do such assessments and thus both prescribed and manufactured lenses. As the demands for eyecare increased, and the task of manufacturing lenses and glasses was delegated to new professional craftsmen: opticians. The field of optometry developed in the late 1800s, prompting some opticians to move beyond lens construction to study the eye in order to examine and prescribe lenses independently. Between 1860 and 1910, leading optometrists lobbied for state recognition and regulation, resulting in the successful identification of optometry as a profession, supported by the new the American Optometry Association.

Ophthalmologists took a firm stance against the incorporation of optometry into the healthcare system from the 1860s. Nevertheless, optometry licensure passed in most states by the end of the 1920s, forcing ophthalmologists to work closely with optometrists. As this uneasy relationship took shape, disputes over scope of practice expansion for optometrists were repeatedly and successfully fought by ophthalmologists until the 1980s. Today, scope of practice battles continue to be waged in the USA, most recently on the topic of whether optometrists should be licensed to perform minor ocular surgeries. Drawing on journal articles, case histories, congressional reports, newspapers and secondary sources, this presentation examines the roots of this ongoing turf war and the somewhat contentious relationship between ophthalmologists and optometrists between 1860-1930. To navigate today's interprofessional conflicts, this presentation explores how previous conflicts were overcome for the benefit and development of effective team eyecare.

From Head to Tool: Mapping Dermatomes Through the Ages

Sandy Wong

In the late 19th century, researchers first discovered the basis of what is now a key tool in the neurological sensory exam: the dermatome, an area of skin innervated by a single dorsal nerve root. The sensory distribution of multiple dermatomes is referred to as a dermatome map. In addition to localisation of neurologic injuries, dermatomes are also clinically relevant in investigations of referred pain and delineating areas of anesthesia. Textbooks often depict the dermatome map as an eye-catching colorfully labeled diagram. However, the fascinating and nuanced research that brought about the dermatome map is frequently overlooked.

The idea of the dermatome was initially conceptualised through work involving anatomical dissections and spinal cord lesions in rhesus monkeys. In 1900, neurologists Dr. Henry Head (1861-1940) and Dr. Alfred W. Campbell (1868-1937) published the first human dermatome map based on findings from patients with shingles. Multiple dermatome maps were created thereafter, both building on this original map and separately founded based on independent research.

Over the 20th century it became apparent that dermatomes were more complex than previously assumed. Different dermatome maps were found for different modalities of somatic sensation, including tactile sensation, pain, and temperature. Originally thought to consist of discrete regions, where sensation from one bodily location corresponded to one nerve root, dermatomes were found to be dynamic, overlapping, expanding, and contracting depending on the experimental condition. Moreover, progressively more evidence emerged to support that sensation from one bodily location can in fact correspond to more than one nerve root.

This presentation will focus on methods and key findings from the 19th and 20th centuries that have contributed to dermatome mapping. Using scientific journal articles, reviews, and textbooks, both physiological studies and clinical studies will be discussed. Recent theories to explain conflicting dermatome maps will also be considered.

Societal Influences on Psychosurgery: Values Guiding its Adoption, Demise, and Return

Chris Zajner

For an extended period of time in the late 19th to mid-20th centuries the roles of neurosurgery and psychiatry overlapped. The development and growing popularity of the localization hypothesis of brain function in the late 19th century inexorably led to speculations on the potential of ablating or disrupting brain regions associated with psychological dysfunction. The practice consistently provoked extreme controversy and push-back, with an insufficiency of evidence to support its blunt and irreversible nature. The fervor with which the practices of 'leukotomy' (i.e. white matter ablation) were adopted, often failed to recognize the limitations in their scientific methods, and disregarded of the prevailing opinions in the psychiatric and neurosurgical communities. These realities reveal a lack of investment in multidisciplinary patient care in this time period.

Although the story of psychosurgery was relatively short, it is gravid with historical lessons, of the complex process by which clinically relevant medical progress is made. The widespread adoption of the scientifically dubious procedures of lobotomy and leukotomy in the mid-20th century, is contemporaneously touted as a story exemplifying the unremitting harm physicians can inflict on patients. But this story may more accurately – if not more helpfully – enlighten us about the historical, cultural, scientific, and social reality in which clinical treatments arise, and must ultimately respect, if they are to 'become' and remain relevant.

The societal pressures which allowed the extensive adoption of leucotomy/lobotomy in the 20th century may remain operative in a less pernicious form today. With recent advances in deep brain stimulation, and the possibility to surgically treat specific psychiatric illnesses, current medicine is faced with similar questions that physicians did in the mid 20th century. The manner in which societal values have a fundamental role in determining which therapeutics are deemed valid in therapeutic scenarios is thus not only an issue of the past, but of today.